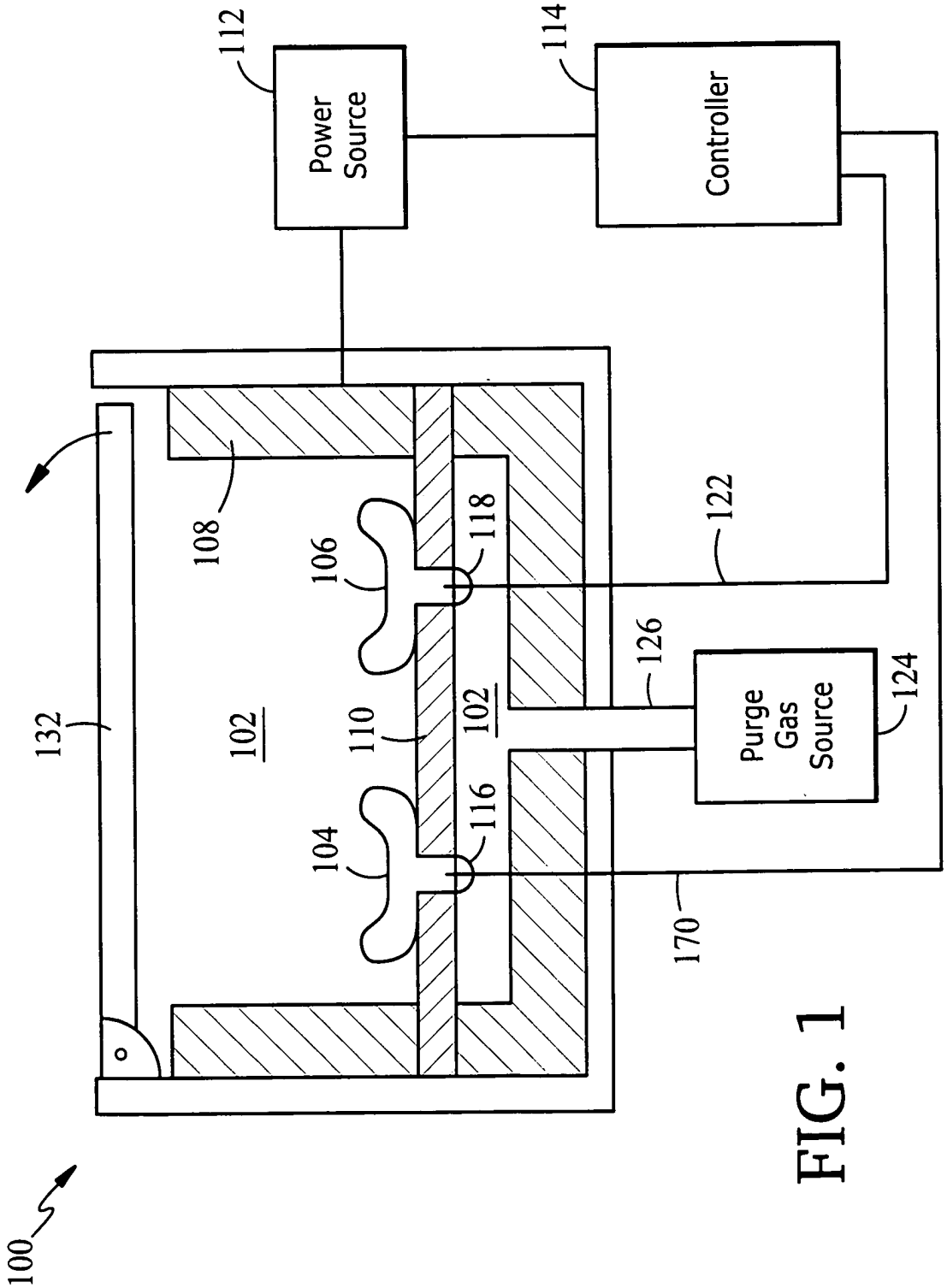

112
Power Source
114
Controller
108
106
118
122
126
Purge Gas Source
124
132
102
110
102
104
116
170
100

FIG. 1

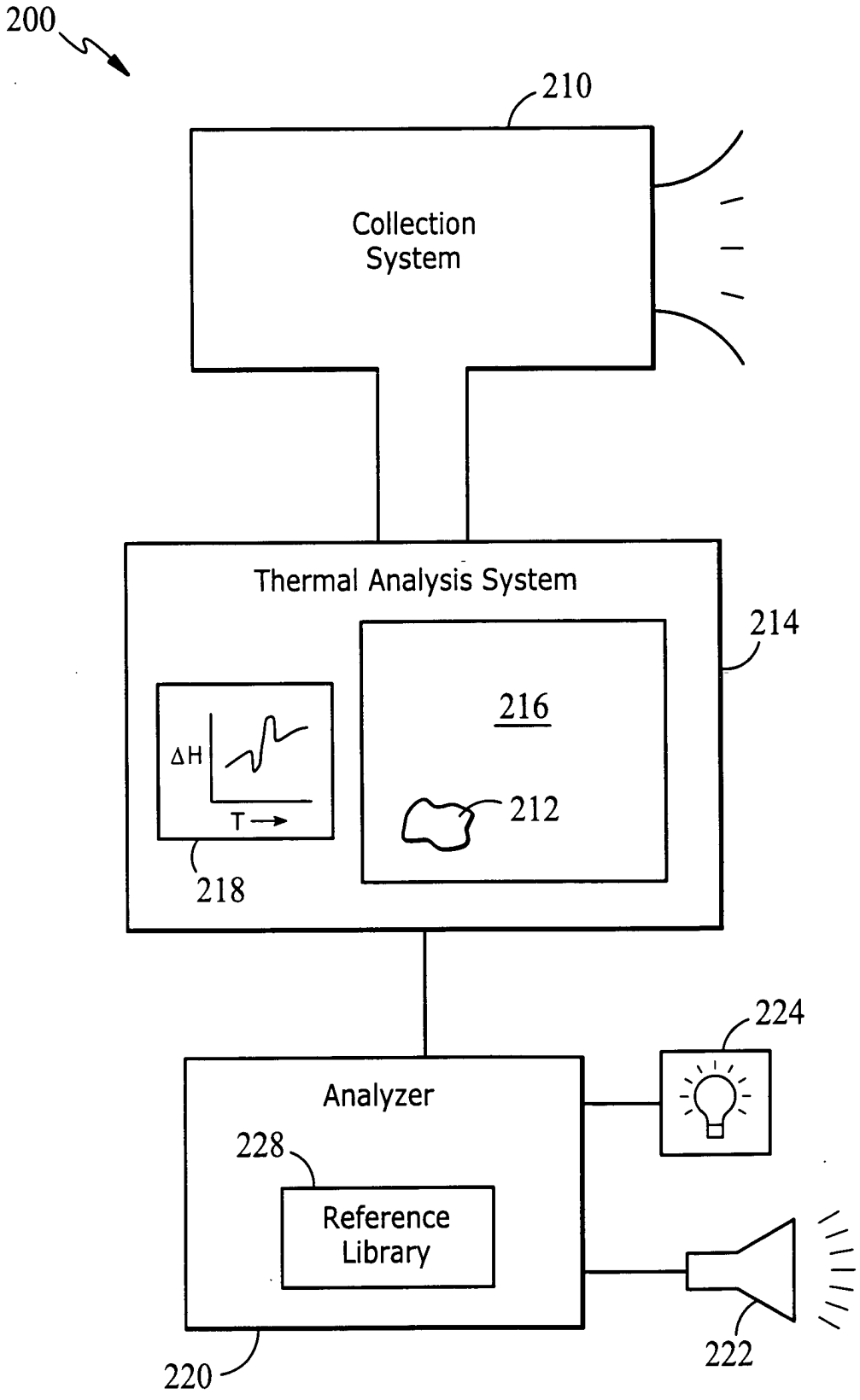

200
210
Collection System
Thermal Analysis System
214
216
212
ΔH
T
218
224
Analyzer
228
Reference Library
220
222

FIG. 2

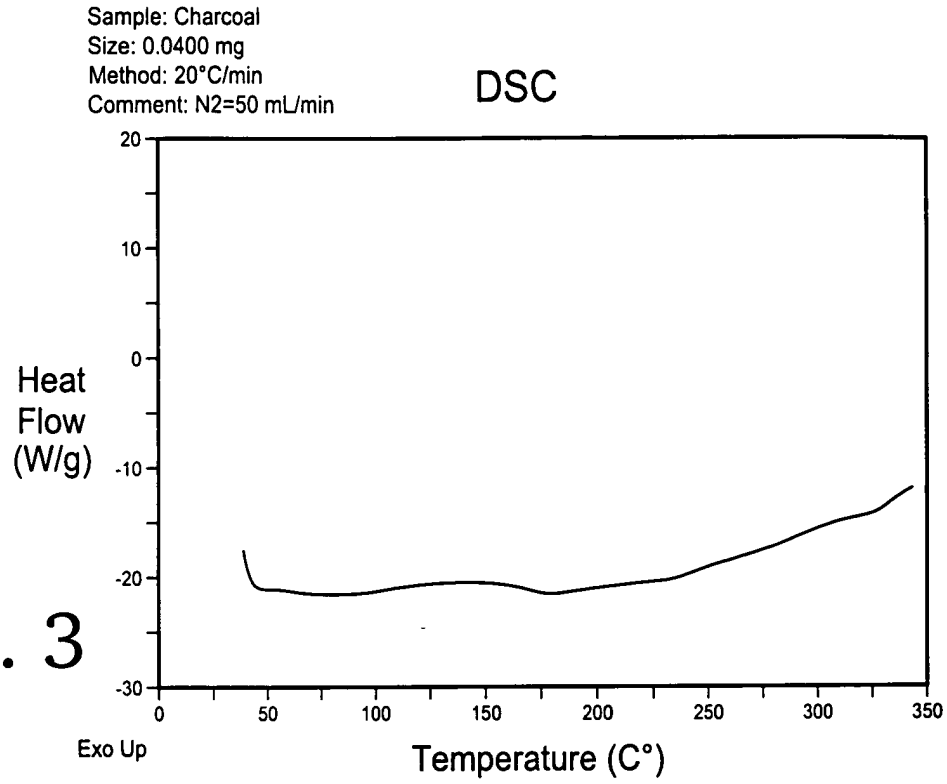


FIG. 3

DSC thermogram of charcoal, sample weight is 0.04 mg

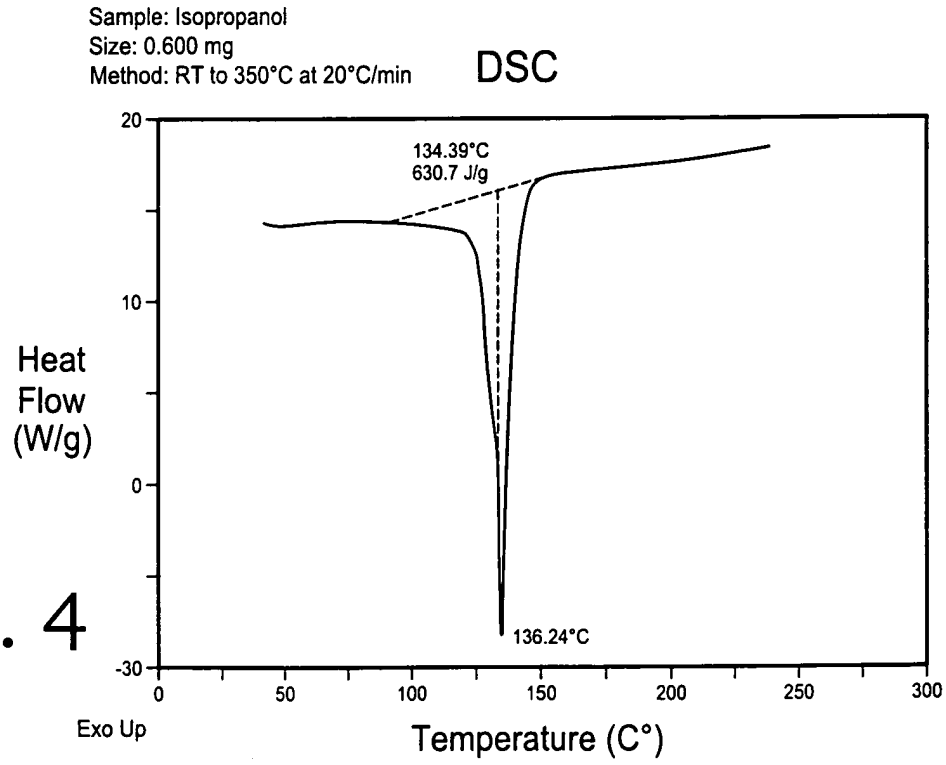


FIG. 4

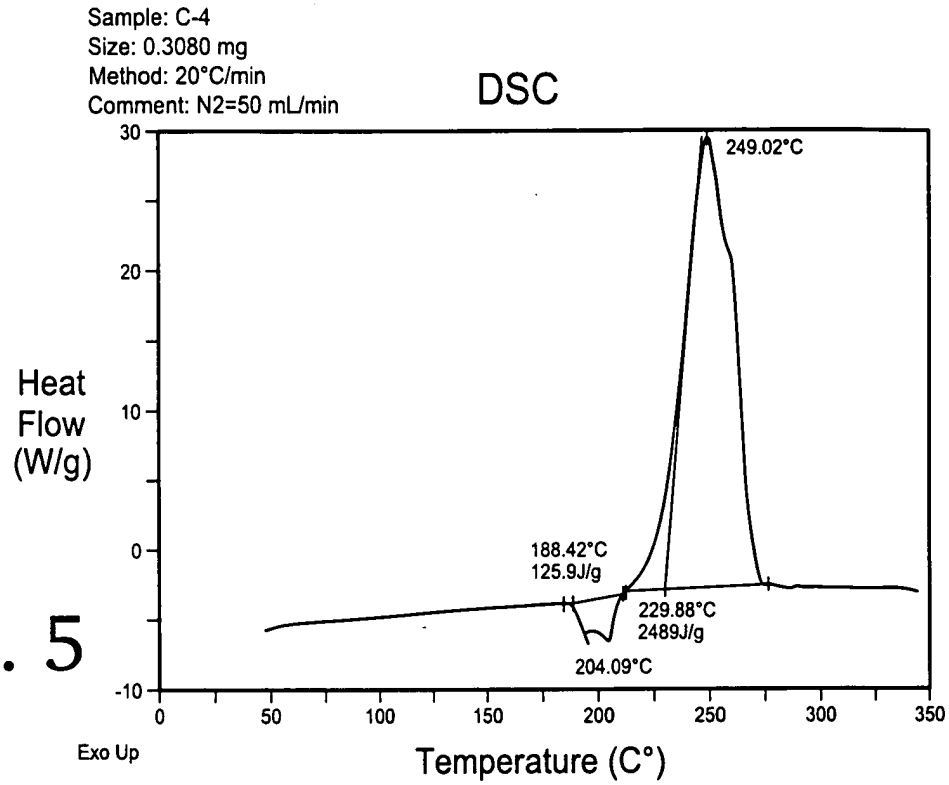


FIG. 5

DSC thermogram of C-4, sample weight is 0.308 mg

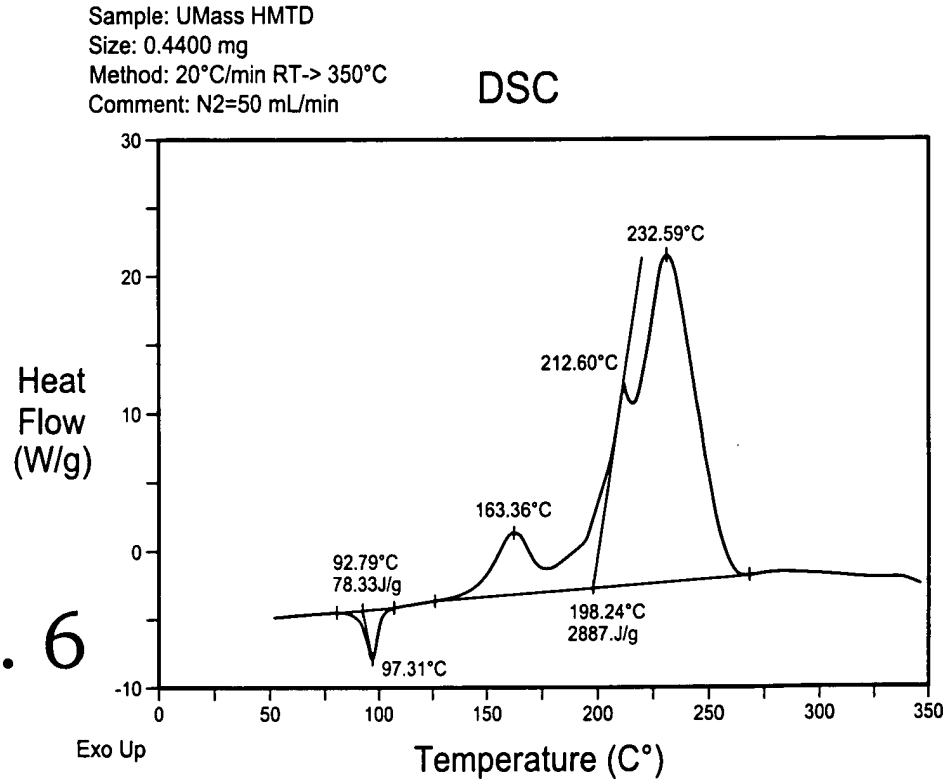


FIG. 6

DSC thermogram of HMTD, sample weight is 0.44 mg

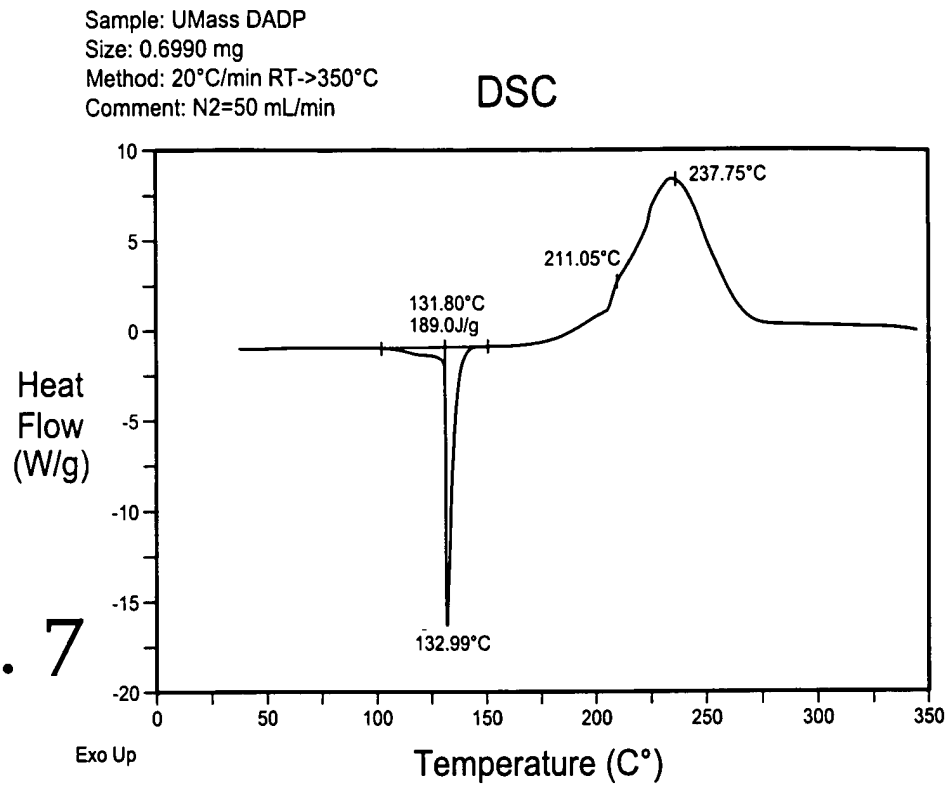


FIG. 7

DSC thermogram of DADP, sample weight is 0.699 mg

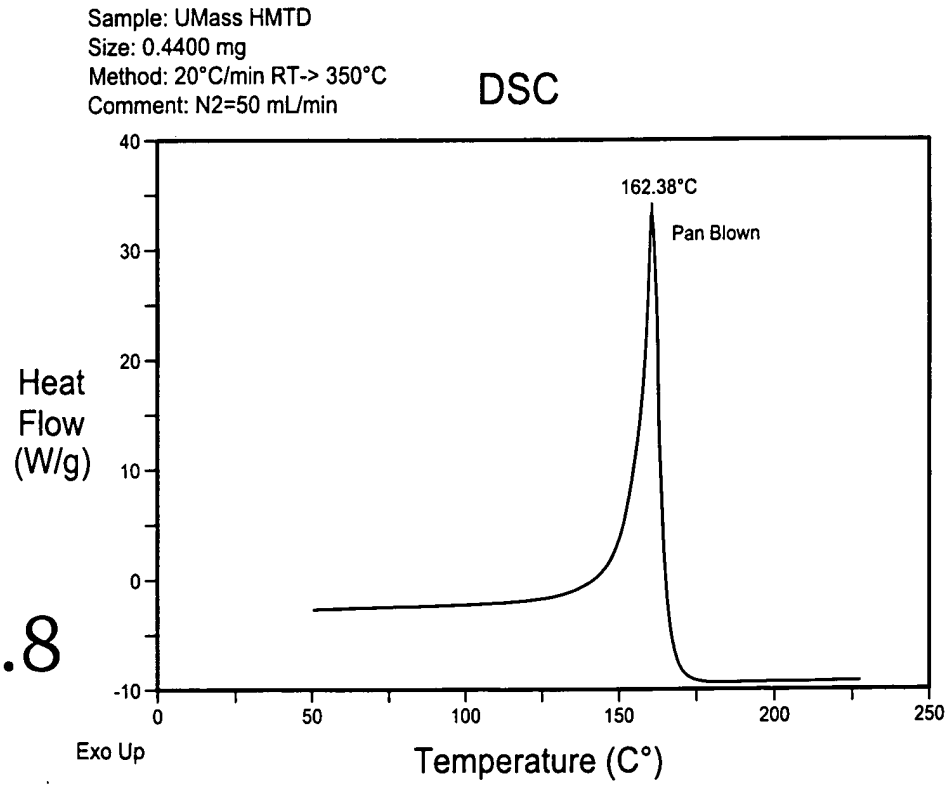


FIG.8

DSC thermogram of HMTD, sample weight is 0.44 mg

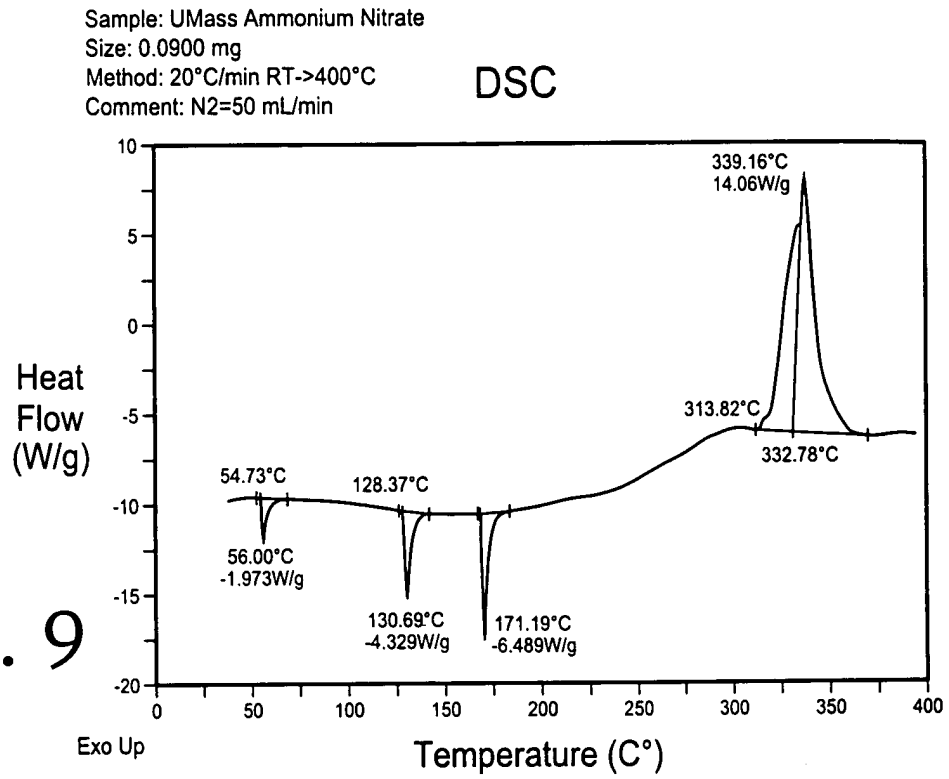


FIG. 9

DSC thermogram of Ammonium Nitrate, sample weight is 0.09 mg

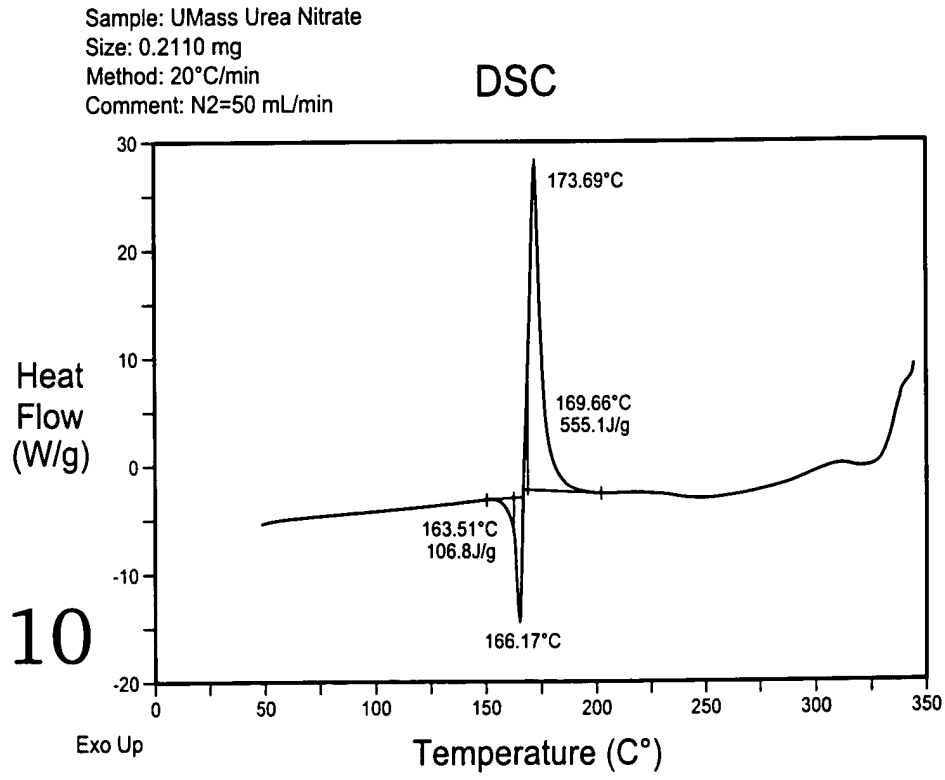


FIG. 10

DSC thermogram of Urea Nitrate, sample weight is 0.211 mg

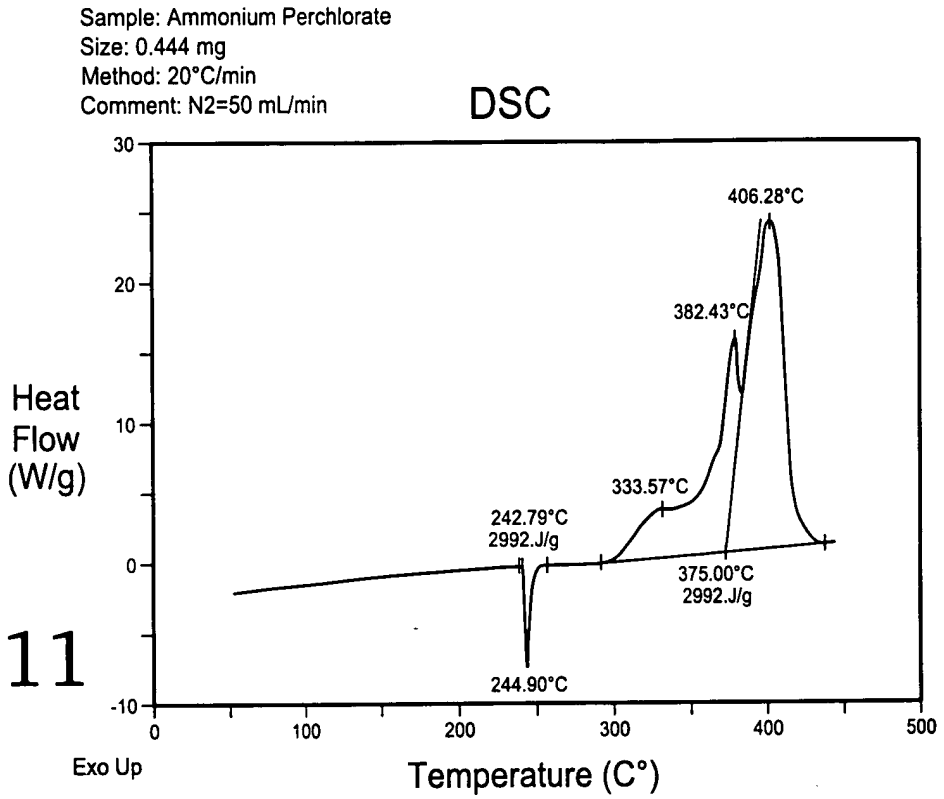


FIG. 11

DSC thermogram of Ammonium Perchlorate, sample weight is 0.444 mg

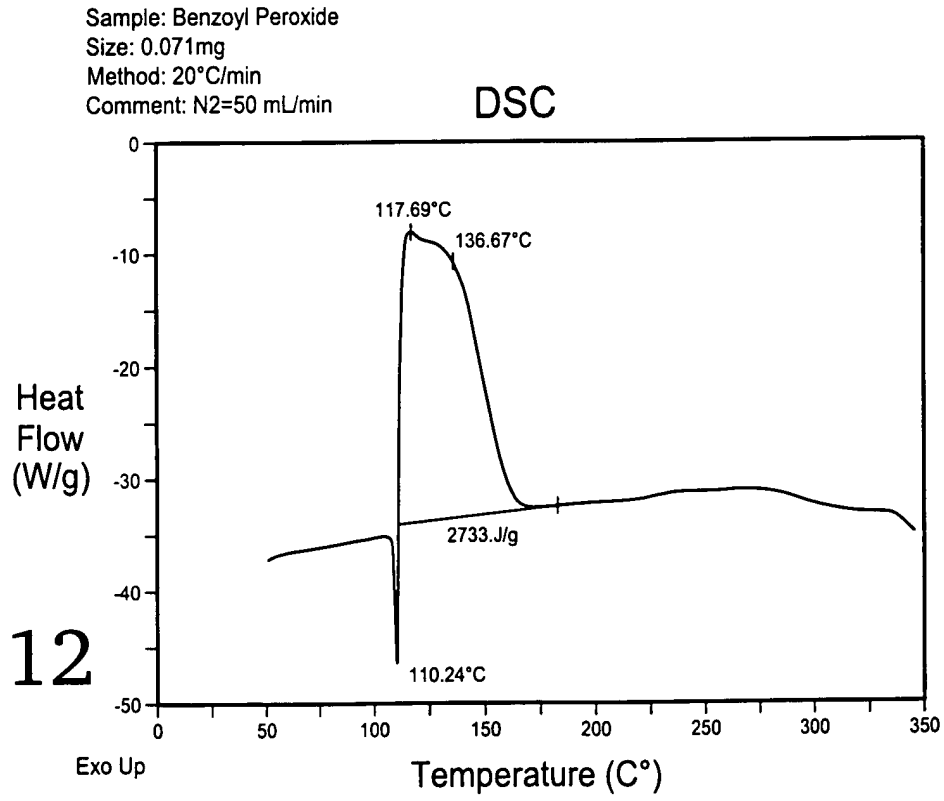


FIG. 12

DSC thermogram of Benzoyl Peroxide, sample weight is 0.071 mg

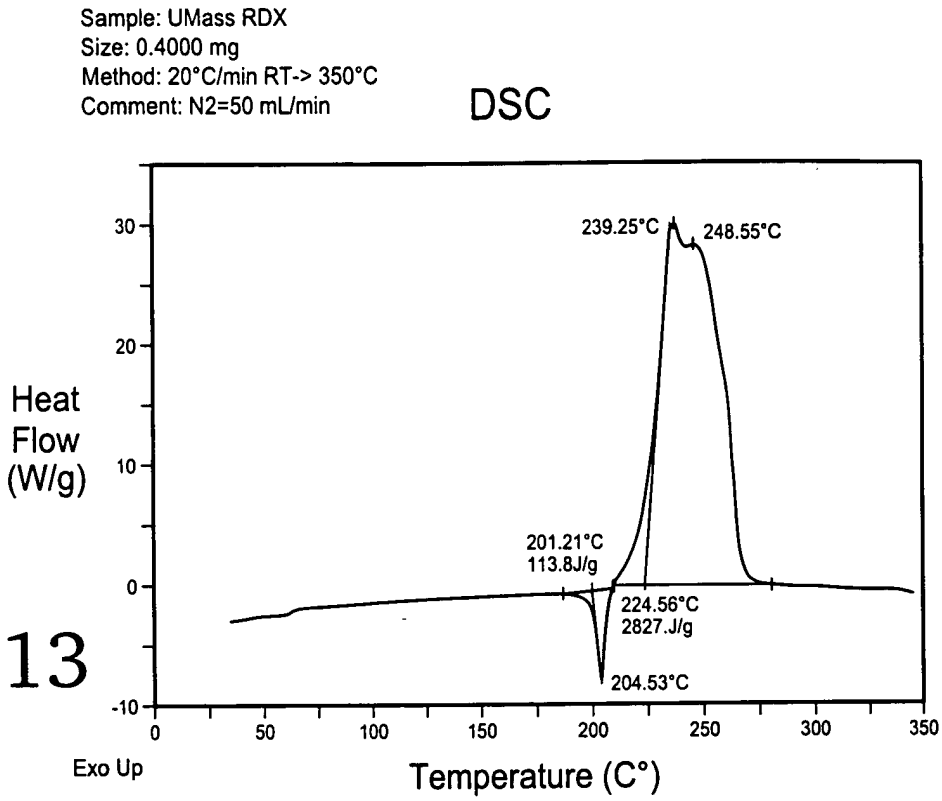


FIG. 13

DSC thermogram of RDX, sample weight is 0.400 mg

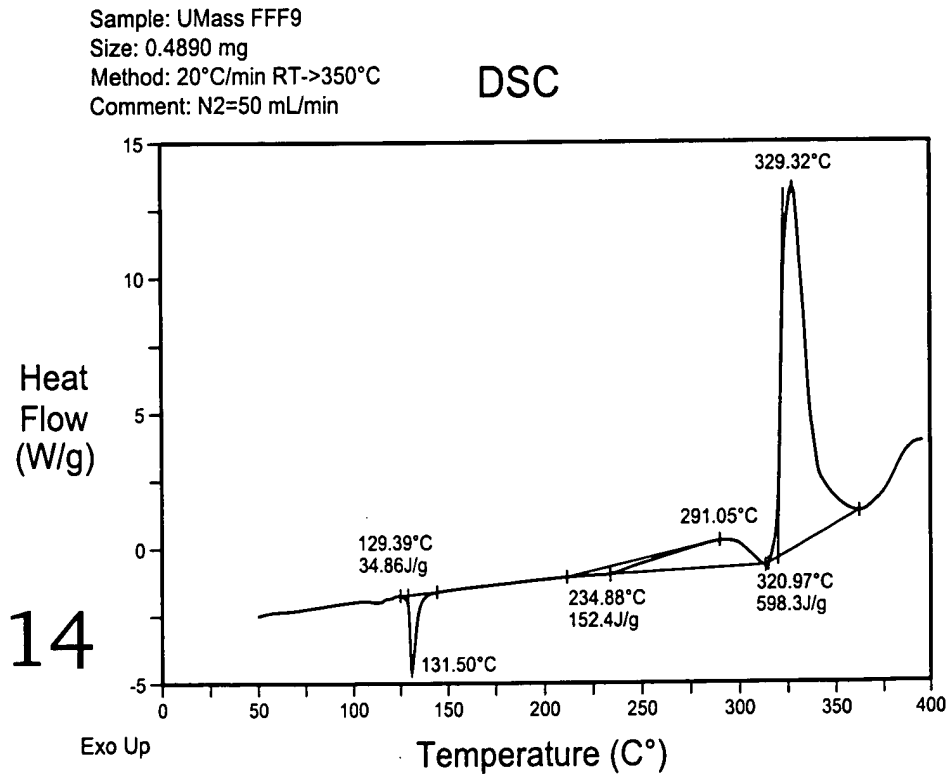


FIG. 14

DSC thermogram of Black Powder, sample weight is 0.489 mg

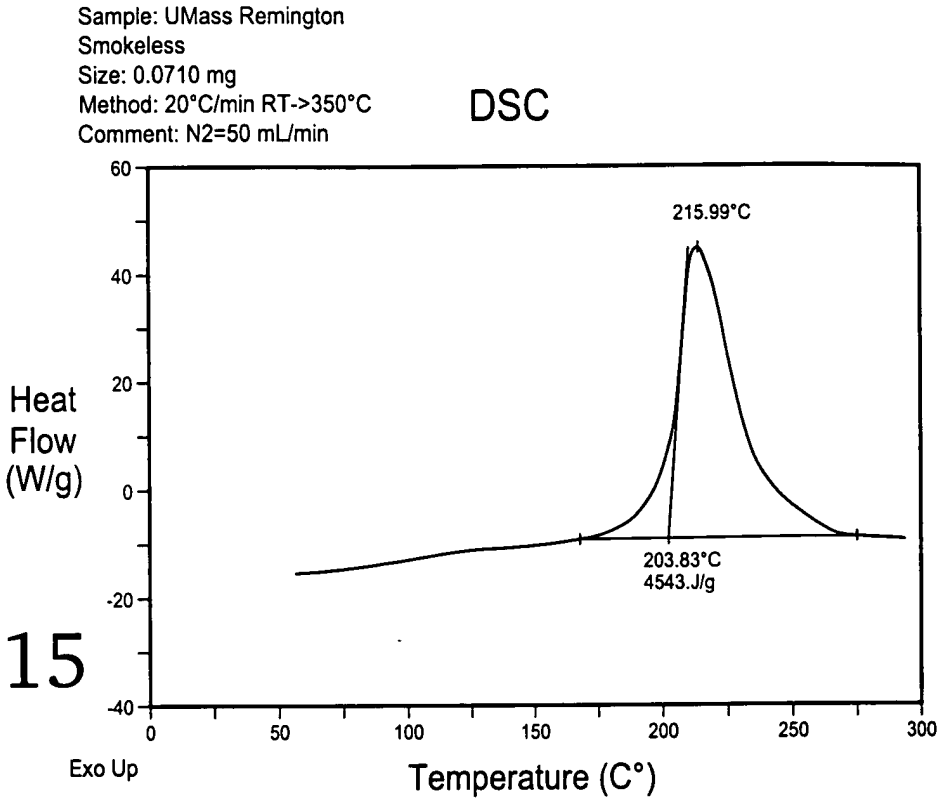


FIG. 15

DSC thermogram of Smokeless Remington,, sample weight is 0.071 mg

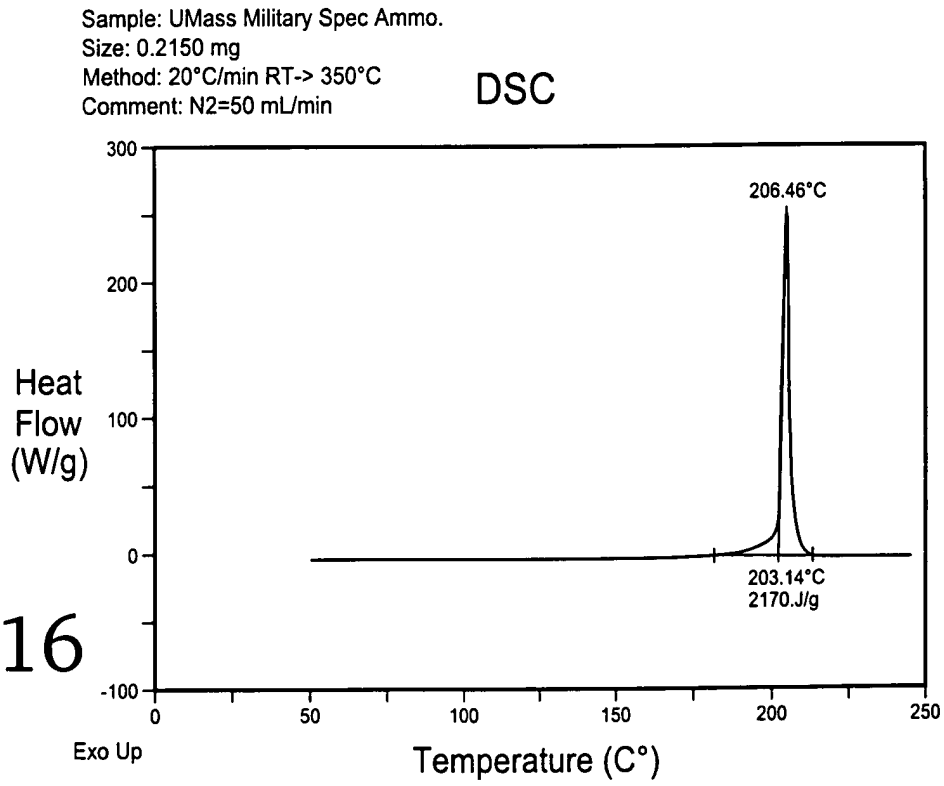


FIG.16

DSC thermogram of Mil. Spec. Ammo., sample weight is 0.215 mg

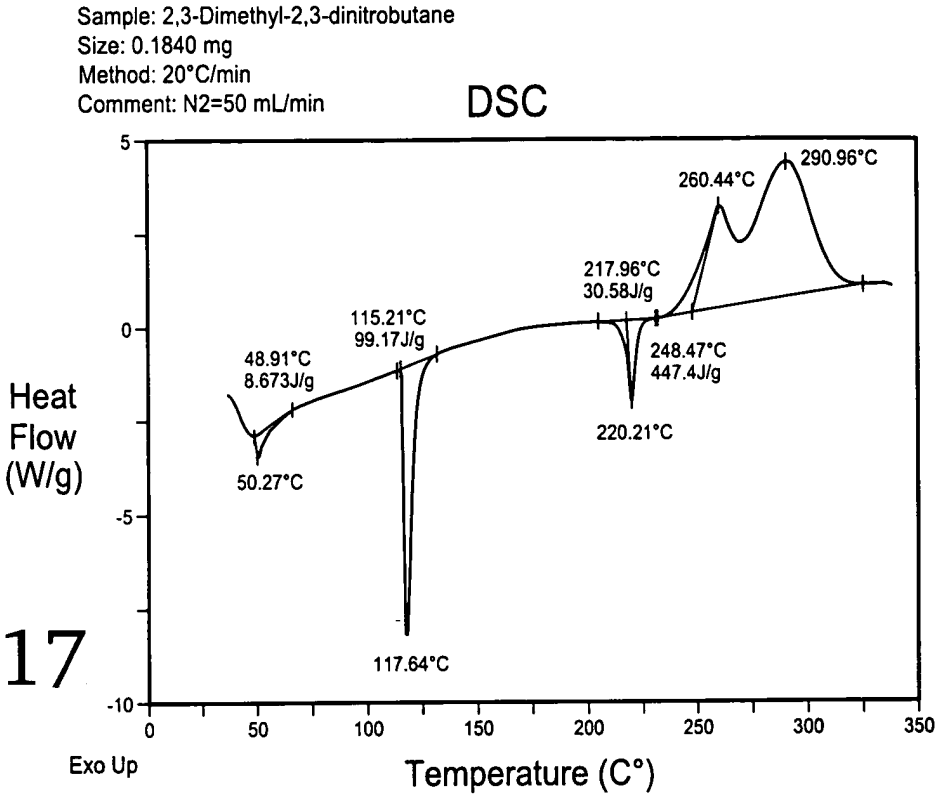


FIG. 17

DSC thermogram of 2,3-dimethyl1-2,3-dinitrobutane, sample weight is 0.184 mg

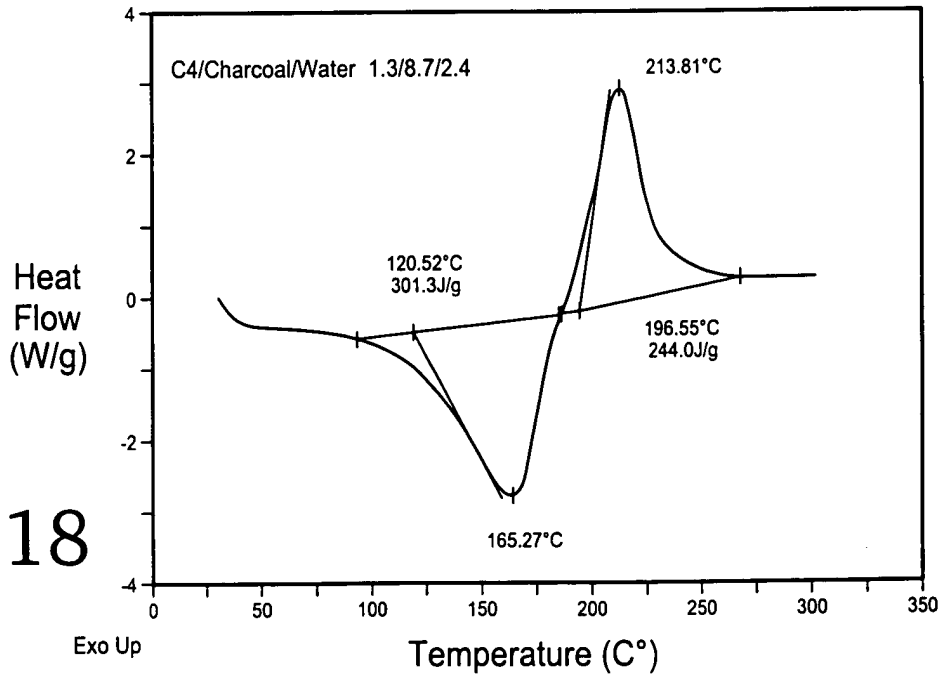


FIG. 18

DSC thermogram of C4/Water/Charcoal, sample weight is 12.3 mg

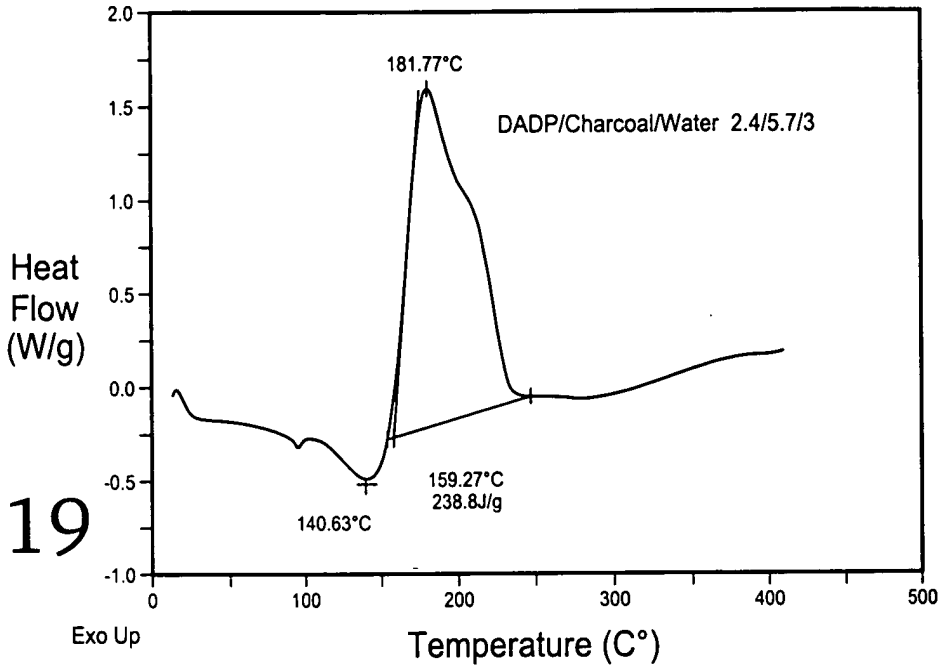


FIG. 19

DSC thermogram of DADP/Water/Charcoal, sample weight is 11.1 mg

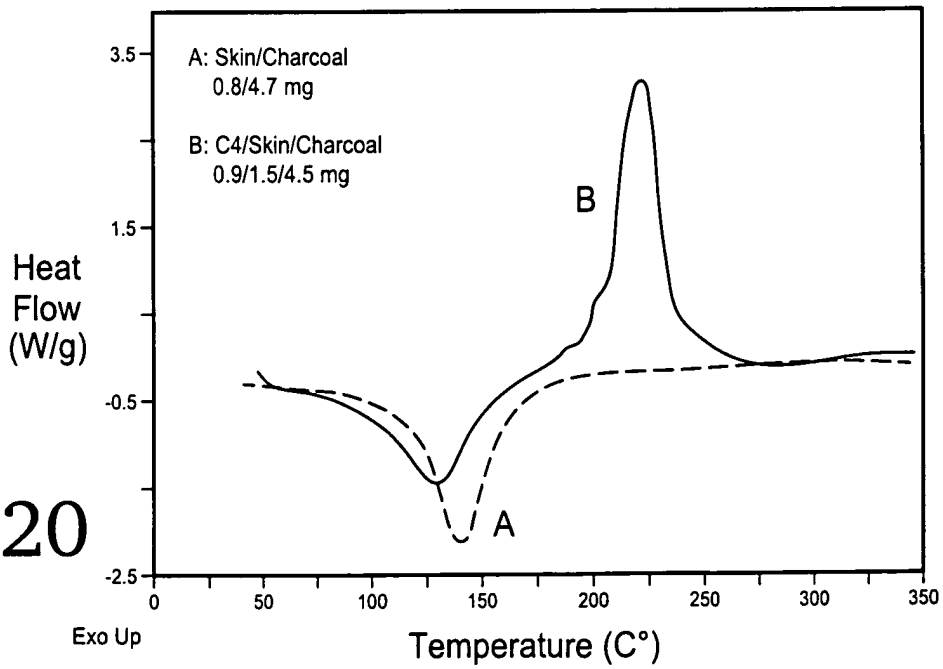


FIG. 20

DSC thermogram for Charcoal/Skin Fragments, and for Charcoal/Skin/C4 mixture

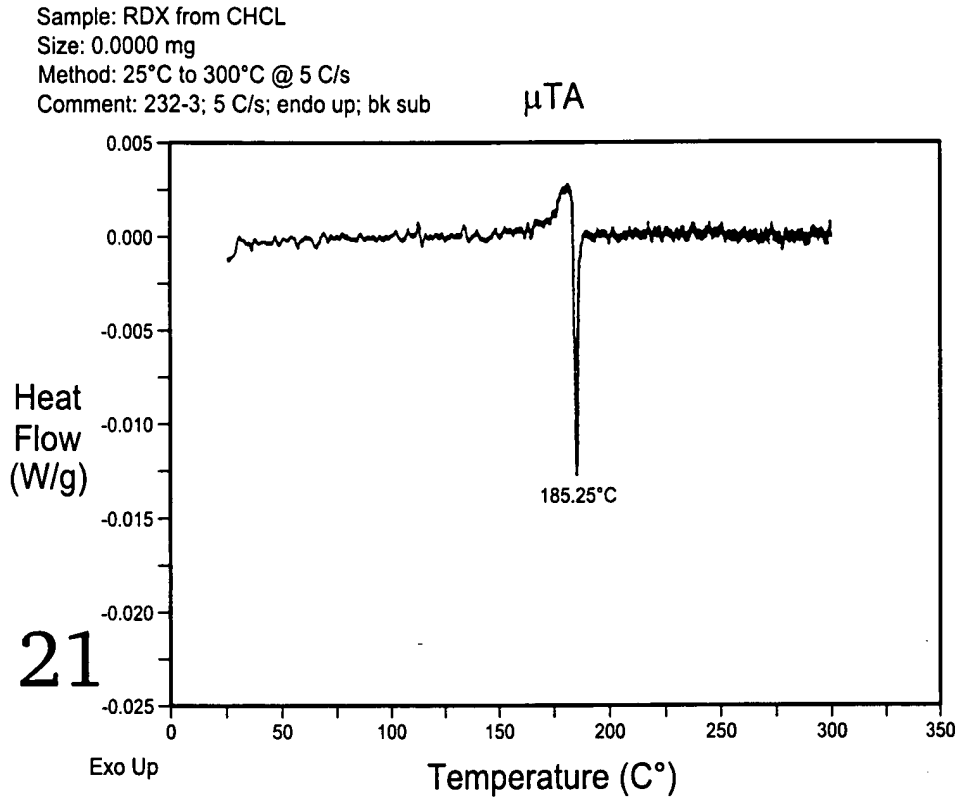


FIG. 21

MicroDSC of RDX with heating rate of 5°C/sec

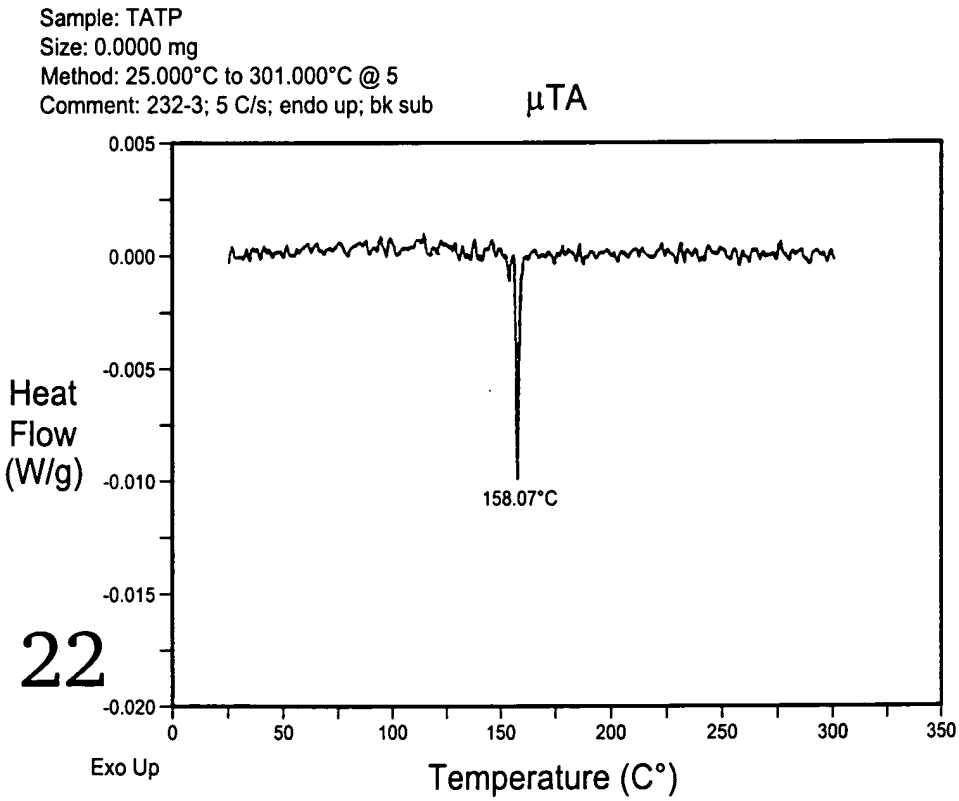


FIG. 22

MicroDSC of TATP

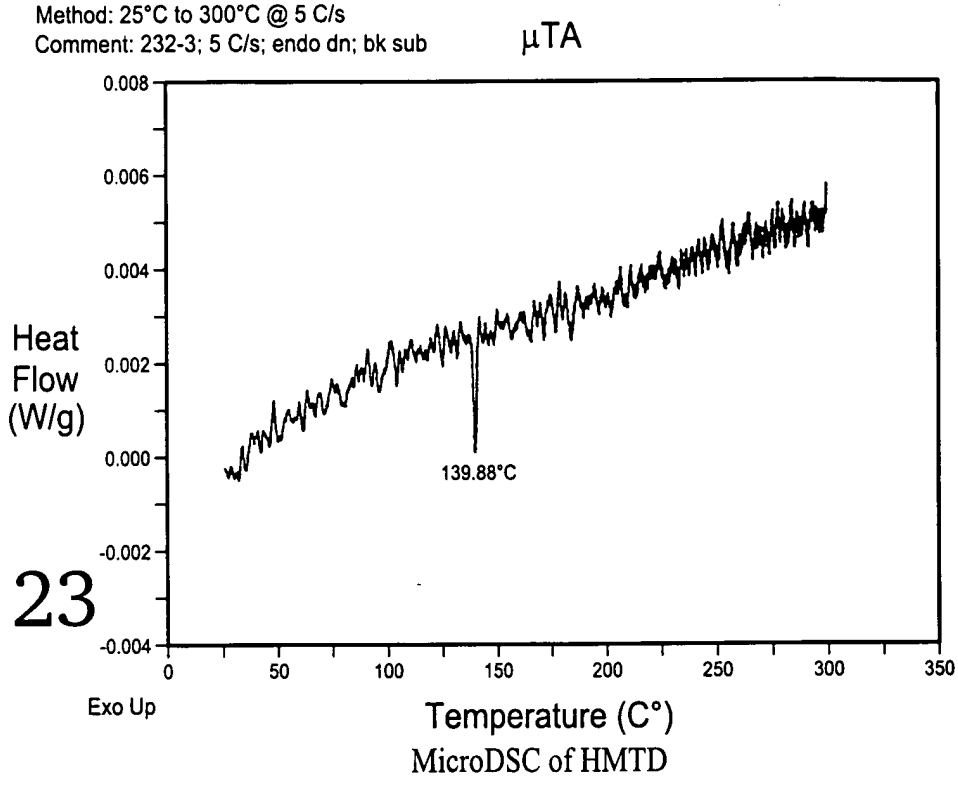


FIG. 23

MicroDSC of HMTD

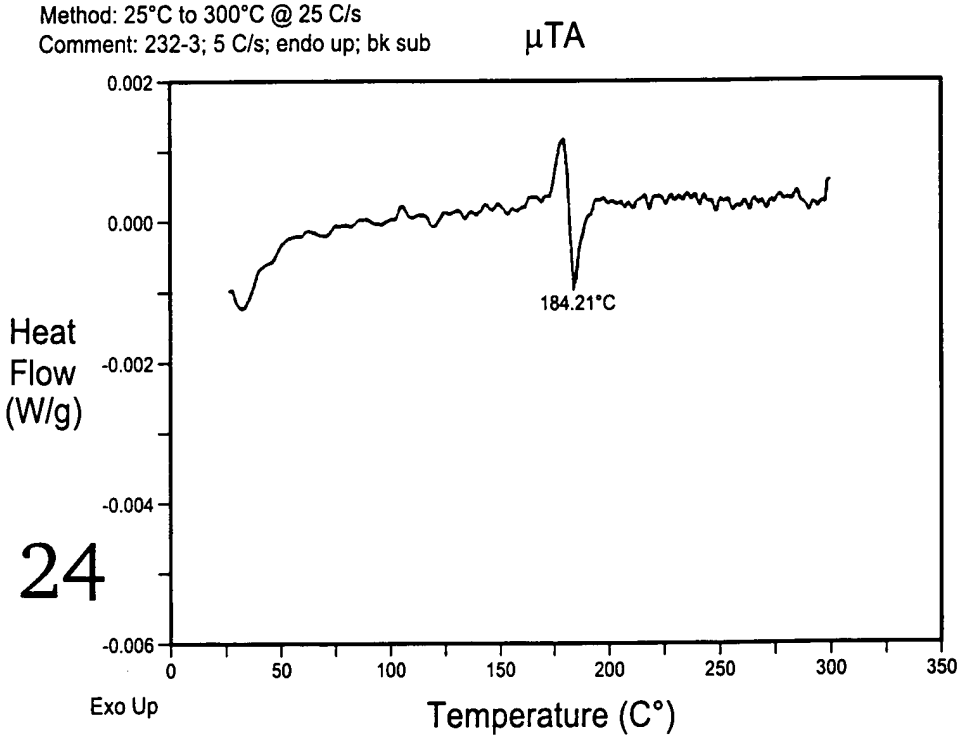


FIG. 24

MicroDSC of RDX with heating rate of 25°C/sec

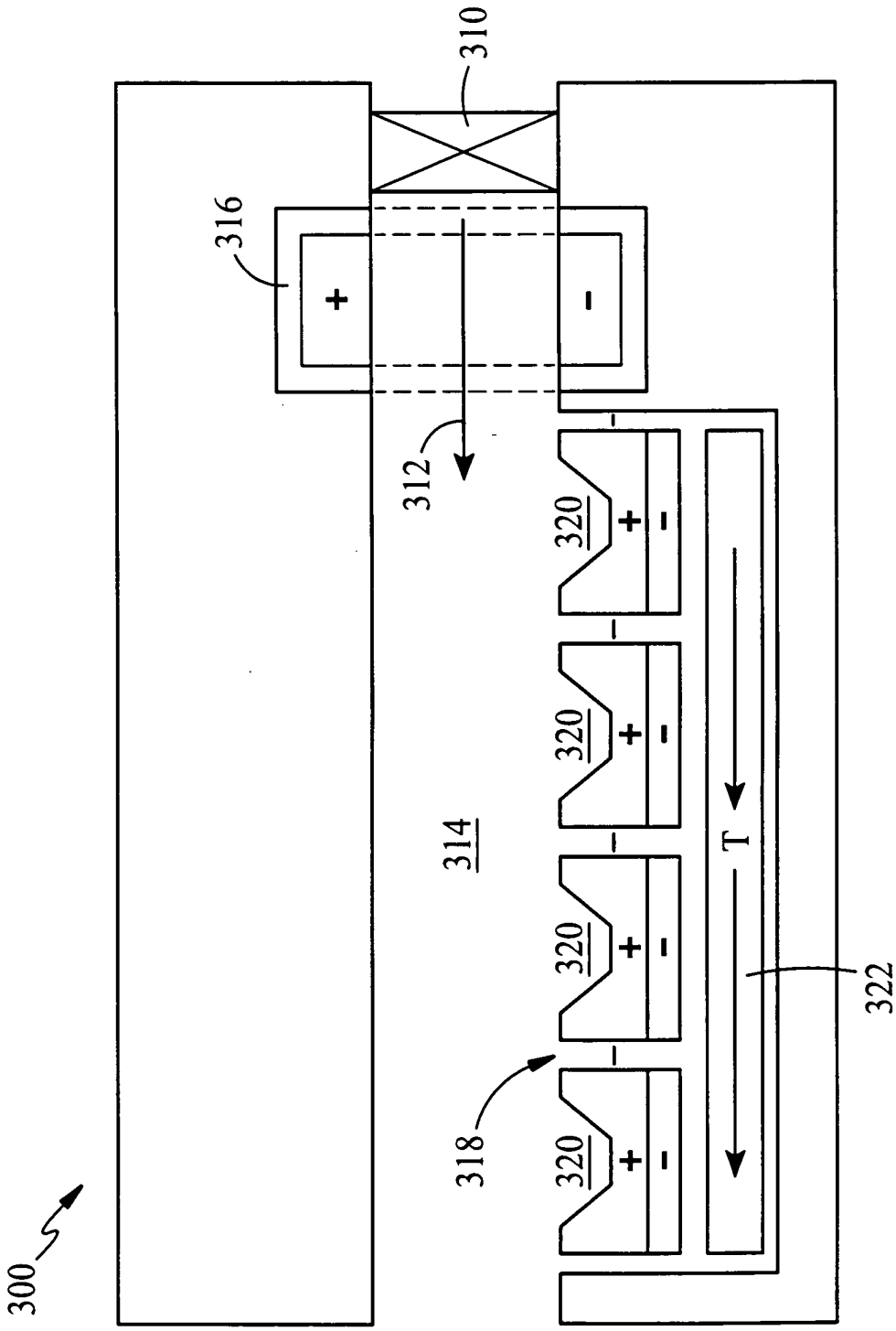


FIG. 25

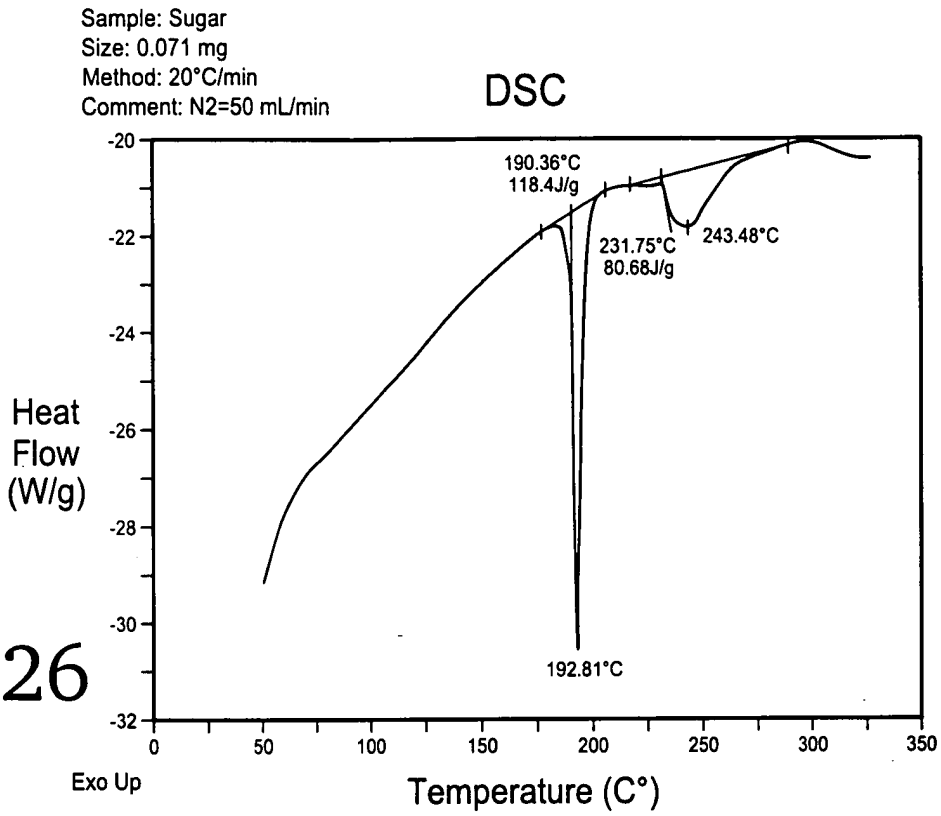


FIG. 26

DSC thermogram of Sugar, sample weight is 0.071 mg

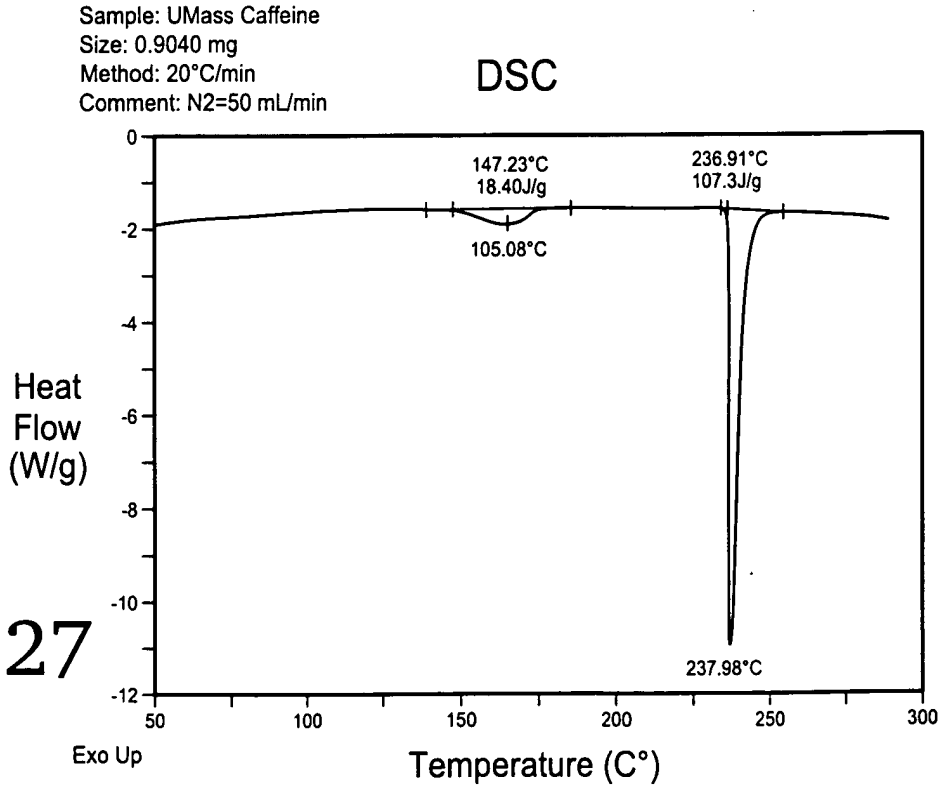


FIG. 27

DSC thermogram of caffeine, a non-explosive, sample weight is 0.904 mg

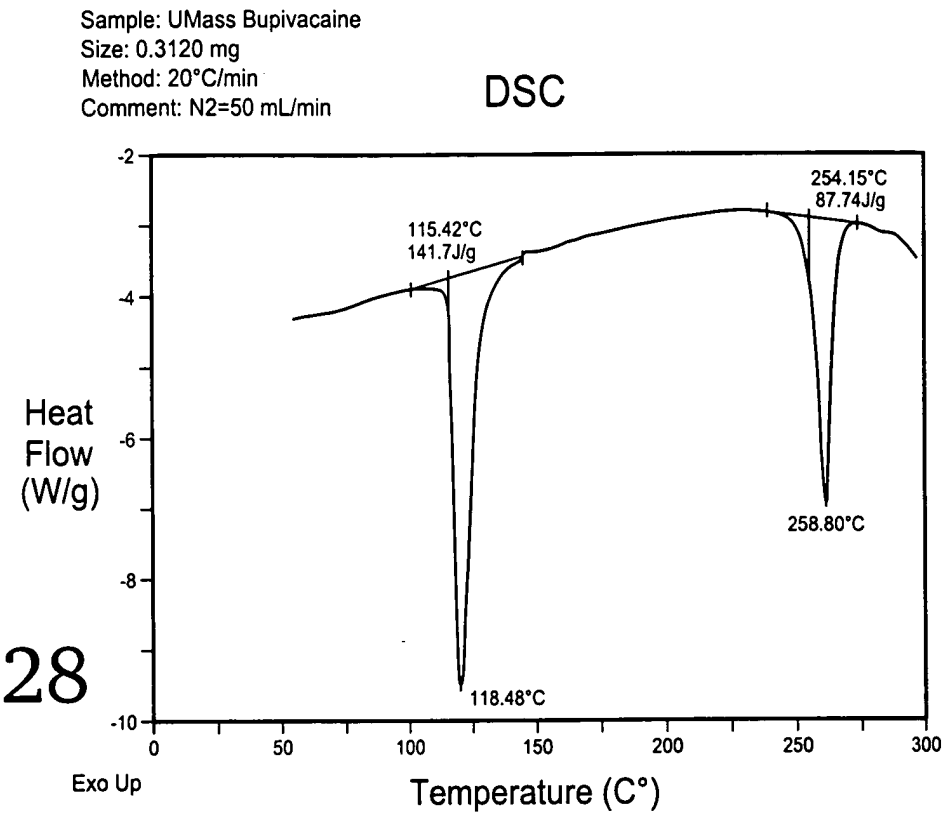


FIG. 28

DSC thermogram of Bupivacaine, sample weight is 0.321 mg

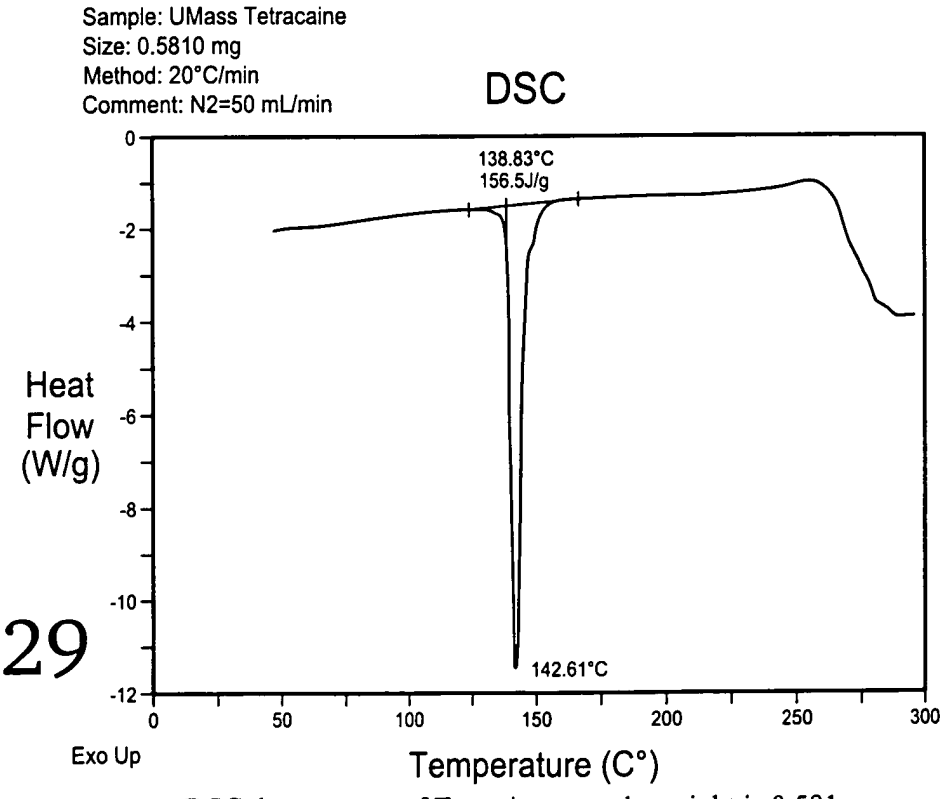
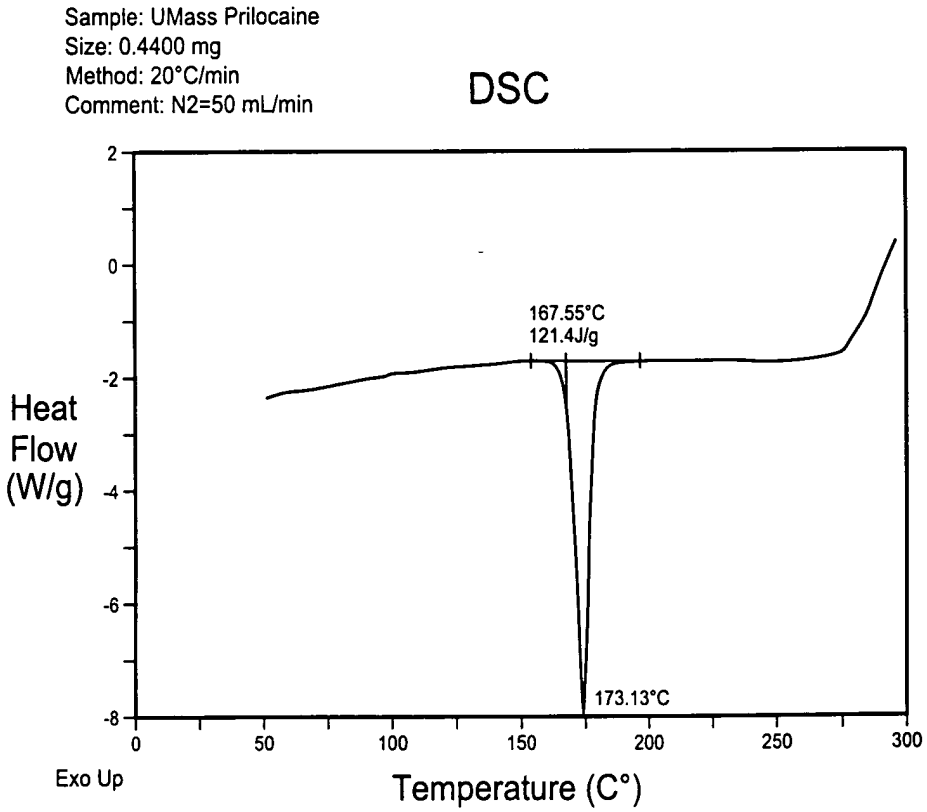


FIG. 29

DSC thermogram of Tetrcaine, sample weight is 0.581 mg



DSC thermogram of Prilocaine, sample weight is 0.44 mg

FIG. 30